

WHAT IS CLAIMED IS:

1. A method, comprising:  
receiving a profile specifying a quality of service (QoS) treatment for packets for at least one application in one or more packet networks; and  
automatically generating configuration information for one or more network elements of said one or more packet networks for treatment of the packets for the at least one application according to said specified QoS treatment.
2. The method of claim 1, further comprising updating a configuration of said one or more network elements based at least in part on said configuration information.
3. The method of claim 1, further comprising selecting, prior to automatically generating configuration information, said one or more network elements for which said configuration information is to be generated.
4. The method of claim 1, further comprising automatically generating at least one traffic descriptor for said application based at least in part on said profile.
5. The method of claim 4, wherein the configuration information includes at least one generic access list automatically generated based at least in part on said at least one traffic descriptor.
6. The method of claim 1, further comprising generating a generic access list for each of said at least one applications.
7. The method of claim 1, further comprising generating a generic access list for each of said at least one applications, each of said generic access lists comprising:  
at least one clause comprising one or more network criteria; and  
at least one match rule specifying whether said one or more packets matching said one or more network criteria are to be permitted or denied.

8. The method of claim 7, wherein said one or more network criteria is selected from the group consisting of a protocol, a source address, a destination address, a source port, a destination port, an Internet Protocol precedence value and an Internet Protocol type of service value.

9. The method of claim 4, further comprising generating at least one access list from said at least one traffic descriptor, said at least one access list being independent of a type of said one or more network elements.

10. The method of claim 5, further comprising generating a corresponding network element specific access list for each of said at least one generic access lists.

11. The method of claim 10, further comprising updating a configuration of said one or more network elements based at least in part on said network element specific access list.

12. The method of claim 1, wherein said receiving step comprises receiving a service plane selection for said at least one application, said service plane specifying at least said quality of service treatment.

13. The method of claim 12, wherein said service plane selection is selected from the group consisting of a normal service plane, a low priority data service plane, a medium priority data service plane, a high priority data service plane, a reserved bandwidth service plane, a video service plane, and a voice service plane.

14. The method of claim 12, further comprising assigning a priority to said at least one application based at least in part on said service plane selection.

15. The method of claim 1, further comprising automatically generating at least one Boolean expression for said profile.

16. The method of claim 1, wherein said profile comprises at least one combination rule.

17. The method of claim 1, wherein said profile comprises at least one combination rule specifying that network traffic that meets all of a plurality of criteria be accepted.

18. The method of claim 1, wherein said profile comprises at least one combination rule specifying that network traffic that meets at least one of a plurality of criteria be accepted.

19. The method of claim 1, wherein said profile comprises at least one combination rule specifying that network traffic that meets none of a plurality of criteria be accepted.

20. The method of claim 4, wherein said automatically generating said at least one traffic descriptor comprises:

translating said profile for each of said at least one user applications into a corresponding traffic descriptor; and

combining said traffic descriptors according to at least one combination rule.

21. The method of claim 4, wherein said automatically generating said at least one traffic descriptor comprises translating at least one simple application descriptor into a conjunction of a plurality of components of said at least one simple application descriptor.

22. The method of claim 21, wherein one or more of said plurality of components are selected from the group consisting of a protocol, a source address, a destination address, a source port, a destination port, an Internet Protocol precedence value and an Internet Protocol type of service value.

23. A system, comprising:

means for generating a list of applications and a list of service planes in a matrix configuration, and enabling selection of a service plane from said list of service planes, each of said service planes specifying a quality of service (QoS) treatment for packets for at least one application in one or more packet networks; and

application logic operable to generate configuration information for one or more network elements of said one or more packet networks for treatment of the packets for the at least one application according to said QoS treatment of a selected service plane.

24. A computer readable storage medium storing instructions which when executed by a computer cause the computer to execute the steps of:

receiving a profile specifying a quality of service (QoS) treatment for packets for at least one application in one or more packet networks; and

automatically generate configuration information for one or more network elements of said one or more packet networks for treatment of the packets for the at least one application according to said specified QoS treatment.